Colorectal cancer in primary care

We have almost certainly underestimated considerably the global epidemic of road traffic injury.

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1 Roberts I, Mohan D, Abbasi K. War on the roads. *BMJ* 2002;324:1107-8.
2 Peden M, Scurfield R, Sleet D, Mohan D, Hyder A, Jarawan E, et al (eds). *World report on road traffic injury prevention.* Geneva: World Health Organization, 2004.
3 Gill M, Goldacre M, Yeates D. Changes in safety on England's roads: analysis of hospital statistics. *BMJ* 2006;333:73-5.
4 Walker L, Williams J, Jamrozik K. Unsafe driving behaviour and four wheel drive vehicles: observational study. *BMJ* 2006;333:71-3.
5 Nabi H, Guéguen A, Chiron M, Lafont S, Zins M, Lagarde E. Awareness of driving while sleepy and road traffic accidents: prospective study in GAZEL cohort. *BMJ* 2006;333:75-7.
6 Edwards P, Green J, Roberts I, Lutchmun S. Deaths from injury in children and employment status in family: analysis of trends in class specific death rates. *BMJ* 2006;333: doi 10.1136/bmj.38875.757488.4F.
7 Roberts I, Norton R, Jackson R, Dunn R, Hassall I. Effect of environmental factors on risk of injury of child pedestrians by motor vehicles: a case-control study. *BMJ* 1995;310:91-4.
8 Roberts I, Norton R, Taua B. Child pedestrian injury rates: the importance of "exposure to risk" relating to socioeconomic and ethnic differences, in Auckland, New Zealand. *J Epidemiol Community Health* 1996;50:162-5.
9 Connor J, Norton R, Ameratunga SN, Robinson E, Civil I, Dunn R, et al. Driver sleepiness and the risk of serious car occupant injury: population based case-control study. *BMJ* 2002;324:1125-8.
10 Langley J, Stephenson S, Cryer C. Measuring road traffic safety performance: monitoring trends in non-fatal injury. *Traffic Inj Prev* 2003;4:291-6.
11 Nantulya V, Reich M. The neglected epidemic: road traffic injuries in developing countries. *BMJ* 2002;324:1139-41.
12 Ameratunga S, Hijar M, Norton R. Road traffic injuries: confronting disparities to address a global health problem. *Lancet* 2006;367:1533-40.

Colorectal cancer in primary care

Even with national screening, primary care can do more to cut mortality

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Primary care has a substantial role in reducing the public health burden of colorectal cancer. Given that mortality from colorectal cancer increases with more advanced disease at diagnosis[1] and that most patients present with symptoms that prompted them to consult their general practitioner,[2] both patients and doctors need to recognise the symptoms that suggest a high risk of cancer.

In this week's *BMJ* du Toit and colleagues report a 10 year prospective study which confirms the importance of rectal bleeding as an indicative symptom for colorectal cancer.[3] The study found that about one in 10 patients with new onset rectal bleeding had cancer. The authors say that general practitioners should investigate anyone aged 45 years and older who presents with rectal bleeding, with or without a change in bowel habit.

Lower gastrointestinal symptoms are common in general practice but largely non-specific,[4] and general practitioners face considerable challenges in determining which symptoms warrant urgent attention. The evidence on rectal bleeding varies according to the setting and design of studies, and treating all cases as potential colorectal cancer may lead to many unnecessary investigations.[5]

Yet current patterns of practice need to change. We know, for example, that standard guidance is insufficient to ensure the best use of urgent referrals.[6] A promising development is the use of diagnostic algorithms based on symptom scores, which can guide clinicians in interpreting various combinations of symptoms and patients' characteristics.[7] These techniques need refining using data from primary care populations that have not been referred to specialists. We also urgently need studies examining whether incorporating estimates of quantitative risk into decision making on cancer referral can work—in the same way that estimating cardiovascular risk is now routine in primary care.

To reduce the future burden from colorectal cancer, primary care must engage with a range of strategies beyond symptom based early diagnosis. The UK government has decided to introduce screening in England based on the faecal occult blood test. Evidence supporting screening for bowel cancer is convincing,[8] and the UK pilot study has shown that screening is feasible in the general population, with acceptable rates of uptake and detection.[9] The programme is being rolled out (albeit more slowly than expected[10]), and recruitment and follow-up will be organised centrally, although some of the workload (such as meeting patients' information needs) will spill over to primary care.[11] Other countries such as Australia are similarly committed,[12] though with less central coordination. The US government favours an unregulated approach in which screening by faecal occult blood testing is often bypassed for more definitive tests such as colonoscopy.[13]

In England general practitioners will need to correct patients' misunderstandings about bowel cancer and to emphasise the low sensitivity of the faecal occult blood test. The programme in England is targeting 60-69 year olds initially (based largely on arguments of cost effectiveness and higher yield). Those working in primary care will inevitably deal with patients on either side of this narrow age window asking about symptoms and requesting screening, and will probably field more inquiries about dietary factors such as fibre and fruit consumption.[14] Furthermore, ongoing effort will be required to maintain participation rates close to 60%, and this will be strongly influenced by information received in primary care.[11]

Perhaps most importantly, many people invited for screening will have symptoms, and they may believe that taking a screening test precludes the need to have those symptoms investigated further. On the contrary, rigorous symptom based diagnosis will still be vital in reducing rates of missed and interval cancers, and cancers in non-participants.

The paper by du Toit and colleagues[3] adds to a growing body of evidence that we need to investigate new onset rectal bleeding effectively. Further studies

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should refine existing guidance on rectal bleeding and other gastrointestinal symptoms. Consideration of the specific characteristics of rectal bleeding may, for example, have the potential to improve the sensitivity and specificity of referral to specialist care.[14]

A consistent message from available evidence is that general practitioners should treat rectal bleeding with a high index of suspicion, take into account other factors related to patients and not be distracted by the presence of haemorrhoids or other pathology unrelated to cancer. They will also have an increasingly important role in educating patients about responding to symptoms in the context of a screening programme.

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1 Mulcahy HE, O'Donoghue DP. Duration of colorectal cancer symptoms and survival: the effect of confounding clinical and pathological variables. *Eur J Cancer* 1997;33:1461-7.
2 Airey C, Becher H, Erens B, Fuller E. *National surveys of NHS patients–cancer: national overview 1999/2000.* London: Department of Health, 2002.
3 Du Toit J, Hamilton W, Barraclough K. Risk in primary care of colorectal cancer from new onset rectal bleeing: 10 year prospective study. *BMJ* 2006;333:69-70.
4 Wauters H, Van Casteren V, Buntinx F. Rectal bleeding and colorectal cancer in general practice: diagnostic study. *BMJ* 2000;321:998-9.
5 Thompson MR, Heath I, Ellis BG, Swarbrick ET, Faulds Wood L, Atkins WS. Identifying and managing patients at low risk of bowel cancer in general practice. *BMJ* 2003;327:263-5.
6 Flashman K, O'Leary DP, Senapati A, Thompson MR. The Department of Health's "two week standard" for bowel cancer: is it working? *Gut* 2004;53:387-91.
7 Selvachandran SN, Hodder RJ, Ballal MS, Jones P, Cade D. Prediction of colorectal cancer by a patient consultation questionnaire and scoring system: a prospective study. *Lancet* 2002;360:278-83.
8 Towler B, Irwig L, Glasziou P, Kewenter J, Weller D, Silagy C. A systematic review of the effects of screening for colorectal cancer using the faecal occult blood test, Hemoccult. *BMJ* 1998;317:559-65.
9 UK Colorectal Cancer Screening Pilot Group. Results of the first round of a demonstration pilot of screening for colorectal cancer in the United Kingdom. *BMJ* 2004;329:133.
10 Atkin WS. Impending or pending? The national bowel cancer screening programme. *BMJ* 2006;332:742.
11 Jepson R, Weller D, Alexander F, Walker J. Impact of UK colorectal cancer screening pilot on primary care. *Br J Gen Pract* 2005;55:20-5.
12 Macrae FA. Screening for colorectal cancer: virtually there. A national rollout of faecal occult-blood screening, federally funded, is the best approach. *Med J Aust* 2005;182:52-3.
13 Winawer S, Fletcher R, Rex D, Bond J, Burt R, Ferrucci J, et al. Colorectal cancer screening and surveillance: clinical guidelines and rationale—update based on new evidence. *Gastroenterology* 2003;124:544-60.
14 Ellis BG, Thompson MR. Factors identifying higher risk rectal bleeding in general practice. *Br J Gen Pract* 2005;55:949-55.

Support for young people with diabetes

Reducing psychological distress may improve metabolic control

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The prevalence in Europe of insulin dependent (type 1) diabetes in children by age 15 is about 3 per 1000 and rising at roughly 2-5 % yearly.[1] This complex and chronic illness interferes with almost every aspect of day to day life and can be a considerable burden for the child and the family. Therapeutic goals include "promotion of optimal health, social wellbeing and quality of life for all diabetic children around the world."[2]

Living with diabetes entails continuous daily attention to a complex array of management options, including insulin administration and dose adjustments around variable meals and exercise, blood glucose monitoring and its interpretation, maintaining a healthy diet, and understanding the need for early detection of both acute and long term complications. This is daunting for many young people. In this week's *BMJ* Winkley and colleagues report a meta-analysis of one approach to helping these young people: psychological interventions for managing glycaemic control.[3]

Satisfactory metabolic control as measured by glycated haemoglobin may prevent long term microvascular and macrovascular complications. The studies providing evidence for this emphasise the importance of successful intensified treatment.[4] Regimens comprising multiple dose injections of insulin before meals and bedtime more closely mimic normal patterns of insulin secretion than conventional regimens of one or two injections daily and, if used appropriately, can maintain near normal blood glucose values. Newer analogue insulins, sophisticated insulin pumps, and continuous blood glucose monitoring systems are changing the face of insulin management in young people.

But intensified treatment places greater demands on the patient and the family. A curriculum of appropriate education at the onset of diabetes and over time can show patients and families how to adjust insulin dosages for variations in food intake and exercise, parties, holidays, sick days, and other different life events. Knowledge alone, though, does not necessarily improve adherence to treatment, and this is particularly true during adolescence.[5 6 w1-w3]

Why does metabolic outcome in children and even more so in adolescents remain, at best, suboptimal in many centres, despite technical and therapeutic improvements?[w4] And why does metabolic control vary so much between children as well as between centres, despite attempts to implement basic standards for the care of children with diabetes, including the use of specialised multidisciplinary teams?[7 8]

The biggest study in adolescents with diabetes showed that better metabolic control may be associated with improved quality of life, whereas poorer metabolic control is associated with anxiety, depression, low self esteem, and fears about diabetes.[9] Moreover, poor initial psychological adjustment in children and adolescents is linked to poorer long term outcome of diabetes,[10] while family cohesion is associated with better long term outcome.[11]

In their meta-analysis in this week's *BMJ* Winkley and colleagues report that psychological interventions in childhood have a positive but weak effect on metabolic control in diabetes, a finding that has not been shown in studies in adults.[3] Importantly, the beneficial effect on the psychological distress of the children and their families was strong and significant. Randomised controlled trials included in this systematic review had

References w1-w5 are on bmj.com

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